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09/975,806	10/11/2001	Jeffrey F. Krizan	ITOCHU P-1 / 500921.20001	9185
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REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			MANLOVE, SHALIE A	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/975,806
Filing Date: October 11, 2001
Appellant(s): KRIZAN, JEFFREY F.

MAILED
MAY 12 2005
GROUP 1700

Jules E. Goldberg
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 22, 2004.

JK

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

4,885,034	Kreth	12-1989
3549396	Dietz	12-1970

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2212629

Alessandroni

08-1940

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

Claim 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "blanc fixe" in line 2. There is insufficient antecedent basis for this limitation in claim 1.

In claim 9, line 1; dependency should be to **claim 3** instead of claim 7.

In claim 9, line 2; the **period** after TiO₂ should be deleted.

Claim Rejections - 35 USC § 102

Claims 1, 3-4, and 10 remain rejected under 35 U.S.C. 102(b) as being anticipated by Kreth et al (US 4885034).

Kreth discloses a method of making a composite titanium dioxide pigment with barium sulfate, which can be in a powder (col. 1, lines 10-21; col. 2, line 21-25), the composition of barium sulfate would be 1 to 25% or preferably 5 to 15% by weight, inherently Kreth teaches titanium dioxide would be 99 to 75% or 95 to 85% by weight of the composition (col. 2, line 35-39). Kreth also discloses the pigment composition to further comprise a dispersant (col. 3, line 24-25 and 35-38) of which the composition varies from 0.5 to 20% (col. 3, lines 43-46).

Claim Rejections - 35 USC § 103

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Claims 8, 11, 13, 16, and 18-22 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Kreth et al (US 4885034).

Kreth discloses overlapping percent weight ranges of the barium sulfate pigment composition and dispersant. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Claims 5-6, 13-15 and 17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Kreth et al (US 4885034) as applied to claim 1 above, and further in view of Dietz (US 3549396).

Dietz teaches a pigment in the form of slurry (col. 3, lines 42-44, 51-52) and the pigment contains total solids content of 85 % or less (col. 2, lines 70-73) wherein the pigment is any titanium dioxide pigment including those mixed with barium sulfate.

It would have been obvious to one of ordinary skill in the art to prepare pigment slurry as taught by Dietz using the pigment of Kreth. The resulting slurry composite overlaps that which is claimed, therefore one of ordinary skill would expect the viscosity, sieve residue and temperature to overlap those claimed absent any showing to the contrary. With respect to the pH, all indications are neutral; therefore pH must be 7.

It would also have been obvious to one of ordinary skill in the art to prepare the composition in the form of slurry, of which would display the properties of pH and viscosity to produce a free-flowing, anti-agglomerate high solids content pigment as taught by Dietz.

In addition, it is notoriously well known that the composite titanium dioxide pigment with barium sulfate is used as a pigment that enhances opacity and brightness for substrates such

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as paper and plastic. Therefore, it would have been obvious to one of ordinary skill to add opacifying effective amounts of the taught pigment to paper, plastic or coatings.

Claims 11,12, and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kreth (US 4885034) in view of Alessandroni (US 2212629).

Alessandroni teaches a dispersant from about .2 to 5.0 percent by weight (col. 2, line 60-col. 3, line 41).

It would have been obvious to one of ordinary skill in the art to use Kreth's pigment composition with Alessandroni's additive in order to enhance the anti-agglomerate effect of the pigment composition.

Claims 1-5, 9-10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreth (US 4885034) in view of Alessandroni (US 2212629).

Kreth discloses a method of making a composite titanium dioxide pigment with barium sulfate, which can be in a powder (col. 1, lines 10-21; col. 2, line 21-25), the composition of barium sulfate would be 1 to 25% or preferably 5 to 15% by weight, inherently Kreth teaches titanium dioxide would be 99 to 75% or 95 to 85% by weight of the composition (col. 2, line 35-39). Kreth also discloses the pigment composition to further comprise a dispersant (col. 3, line 24-25 and 35-38) of which the composition varies from 0.5 to 20% (col. 3, lines 43-46). Kreth fails to teach barium sulfate selected from the group consisting of natural barytes.

Alessandroni teaches a method of preparing composite pigments comprising barium sulfate selected from natural barytes or blanc fixe (col. 5, lines 5-8) and is a titanium dioxide stabilizer or anti-agglomerate effective amount (col. 5, line 4-31; col. 6, line 40-51), the reference also teaches the pigment in the form of slurry for the purpose of preparing titanium

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dioxide-barium sulfate composite pigment. Natural barytes is barium sulfate occurring as a mineral and blanc fixe is a synthetic preparation of barium sulfate; hence one would employ natural barytes or blanc fixe as a component in the composition.

It would have been obvious to one of ordinary skill in the art to select barium sulfate from natural barytes as taught by Alessandroni and employ it in Kreth's composition in order to prepare the titanium dioxide pigment composition

(10) Response to Argument

Argument with respect to Art Rejections

Argument with respect to the 35 U.S.C. 112, second paragraph rejection of claim 9. The rejection has been withdrawn in view of the after-final amendments to claim 12 filed on December 5, 2004.

Arguments with respect to the rejection of claims 1, 3-4, and 10 as anticipated under 35 U.S.C. 102(b) by Kreth et al (US 4885034).

Appellants argue that the particular combination as produced by the method of Kreth (US Patent No. 4,885,034) "does not only contain barium sulfate and titanium dioxide."

The Examiner respectfully submits that this is a mischaracterization of Kreth's disclosure by the Appellant. Firstly, the invention of Kreth produces the barium sulfate/titanium dioxide precipitate through reaction of metatonic acid and barium oxide thereto. While Kreth does disclose that calcium oxide may be used in place of, or in combination with, the barium oxide (see the "and/or" language at column 2, lines 29-35), is the Examiner's position that Kreth's disclosure supports the conclusion that barium oxide could be used alone thus resulting in a barium sulfate/titanium dioxide pigment precipitate. Secondly, the transition terminology of

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Appellant's claim, utilizes "comprising", which is inclusive or open ended and does not exclude additional, unrecited elements or method steps. See e.g., *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed Cir.2003).

Arguments with respect to the rejection of claims 8, 11, 13, 16, and 18-22 as unpatentable under 35 U.S.C. 103(a) over Kreth et al (US 4885034).

Appellant's argue that, Kreth is unlike the present invention claimed and that there is nothing in this reference, which suggests that barium sulfate, would have an anti-agglomerative or stabilizing effect on the titanium dioxide.

Appellant's argument has been included in the previous ground of rejection. However, argument against this rejection will be addressed here.

Kreth is particularly like the present invention wherein it teaches the composition of the pigment, and the effective amount of barium sulfate, which overlaps the range, claimed by appellant. It is the Examiner's opinion that the barium sulfate present in the pigment composition of Kreth would have the anti-agglomerative and stabilizing effects upon the titanium dioxide given the fact that the pigment composition of Kreth meets the pigment composition as set forth in applicant's claim 1. Additionally, the reference teaches the pigment can be used in paint, coloring materials, and cosmetic industries (col. 3, lines 32-38). Thus the pigment in a paint formulation would be an opacifying agent that could be applied to any substrate including paper or plastic. The Examiner respectfully submits that Kreth not only teaches the invention but also discloses overlapping percent weight ranges of the barium sulfate pigment composition. The abstract, col. 2, lines 36-38, col. 6, lines 10-16 and example 1, teach the process produces a precipitate mixture of 1-25% by weight barium sulfate of the total solids content, with the

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balance being titanium dioxide. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Arguments with respect to the rejection of claims 5-6, 13-15 and 17 as unpatentable under 35 U.S.C. 103(a) over Kreth et al (US 4885034) as applied to claim 1 above, and further in view of Dietz (US 3549396).

The Appellant has submitted no substantive arguments with regards to this rejection other than the assertion that the reference to Dietz does not cure the deficiencies of Kreth.

The Examiner respectfully submits that Dietz teaches a pigment in the form of slurry (col. 3, lines 42-44, 51-52) and the pigment contains total solids content of 85 % or more titanium (col. 2, lines 70-col. 3, line 2) wherein the pigment is any titanium dioxide pigment including those mixed with barium sulfate.

It would have been obvious to one of ordinary skill in the art to prepare pigment slurry as taught by Dietz using the pigment of Kreth. The resulting slurry composite overlaps that which is claimed, therefore one of ordinary skill would expect the viscosity, sieve residue and temperature to overlap those claimed absent any showing to the contrary. With respect to the pH, all indications are neutral; therefore pH must be 7.

It would also have been obvious to one of ordinary skill in the art to prepare the composition in the form of slurry, of which would display the properties of pH and viscosity to produce a free-flowing, anti-agglomerate high solids content pigment as taught by Dietz.

In addition, it is notoriously well known that the composite titanium dioxide pigment with barium sulfate is used as a pigment that enhances opacity and brightness for substrates such

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as paper and plastic. Titanium dioxide based pigments, for example, are widely used as the pigment base in typical paints for application to coloring material, paint and cosmetics (col. 3, lines 33-38 and 49-63). Therefore, it would have been obvious to one of ordinary skill to add opacifying effective amounts of the taught pigment to paper, plastic or coatings.

Arguments with respect to claims 11,12, and 17 as unpatentable under 35 U.S.C. 103(a) over Kreth (US 4885034) in view of Alessandroni (US 2212629).

The Appellant has submitted no substantive arguments with regards to this rejection other than the assertion that the reference to Alessandroni does not cure the deficiencies of Kreth.

The Examiner respectfully submits that Kreth teaches the composite slurry as an intermediate step and that the composite pigment has applications in the field of paint, which would be applied to a wall (substrate), and coloring materials. However, Alessandroni teaches a dispersant from about .2 to 5.0 percent by weight, which would be employed as a surfactant on the pigment (col. 2, line 60-col. 3, line 41).

It would have been obvious to one of ordinary skill in the art to use Kreth's pigment composition with Alessandroni's additive in order to enhance the anti-agglomerate effect of the pigment composition.

Arguments with respect to claims 1-5, 9-10, and 23 as unpatentable under 35 U.S.C. 103(a) over Kreth (US 4885034) in view of Alessandroni (US 2212629).

The Appellant has submitted no substantive arguments with regards to this rejection other than the assertion that the reference to Alessandroni does not cure the deficiencies of Kreth.

The Examiner respectfully submits that Kreth discloses a method of making a composite titanium dioxide pigment with barium sulfate, which can be in a powder (col. 1, lines 10-21; col.

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2, line 21-25), the composition of barium sulfate would be 1 to 25% or preferably 5 to 15% by weight, inherently Kreth teaches titanium dioxide would be 99 to 75% or 95 to 85% by weight of the composition (col. 2, line 35-39). Kreth also discloses the pigment composition to further comprise a dispersant (col. 3, line 24-25 and 35-38) of which the composition varies from 0.5 to 20% (col. 3, lines 43-46). Kreth fails to teach barium sulfate selected from the group consisting of natural barytes.

Alessandroni teaches a method of preparing composite pigments comprising barium sulfate selected from natural barytes or blanc fixe (col. 5, lines 5-8) and is a titanium dioxide stabilizer or anti-agglomerate effective amount (col. 5, line 4-31; col. 6, line 40-51), the reference also teaches the pigment in the form of slurry for the purpose of preparing titanium dioxide-barium sulfate composite pigment. Natural barytes is barium sulfate occurring as a mineral and blanc fixe is a synthetic preparation of barium sulfate; hence one would employ natural barytes or blanc fixe as a component in the composition.

It would have been obvious to one of ordinary skill in the art to select barium sulfate or natural barytes as taught by Alessandroni and employ it in Kreth's composition in order to prepare the titanium dioxide pigment composition

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Shalie Manlove, Examiner

Conferees:

J.A. Lorengo, Supervisory Patent Examiner

Patrick Ryan, Appeal Conferee

